

KARATE CHAMP  
SERVICE BULLETIN

We have identified the following technical problems on some of the Karate Champ upright video games manufactured to date. We will point these problems out to you in order of priority and prescribe the necessary modifications needed to fix these problems.

PROBLEM 1 COINAGE PROBLEMS

Symptom: When a coin is inserted into the coin mechanism, the coin meter registers it but instead of a credit on the screen, the game resets to the attraction mode.

Symptom: When a coin is inserted a credit is actually shown on the screen but when the player button is pushed to start the game, the screen resets back to the attraction mode instead of starting normal game play.

REFER TO SOLUTIONS, A, B, & C and if problem still persists, perform solution D.

PROBLEM 2 SLOW MOTION VIDEO

Symptom: Infrequently you might experience slow motion character movement (1/8 normal speed) on the screen.

Solution: IC MODIFICATION

Remove the PCB from the game and determine whether you have the DATA EAST part number DE-0190-0, DE-0190-1, DE-0190-2.

If you have PCB part number DE-0190-0 or DE-0190-1, the following instructions refer to the device at location 11K (74LS74) on the upper PCB.

If you have PCB Part number DE-0190-2, the following instructions refer to the device at location 12K (74LS74) on the upper PCB.

- a) Carefully cut Pin No. 4 at a point very close to the PCB and bend it upward. Be Careful not to break the pin off!
- b) Carefully solder a short jumper from Pin No. 4 to Pin No. 14 of this same device (74LS74). NOTE: Pin No. 14 is Vcc (+5v)

DO NOT over heat the device.

DO NOT use excess solder..

DO NOT allow solder bridging to adjacent pins on the device.

The schematic of the effected circuit is found on sheet 1 of 12 of the N01-80 PCB in your KARATE CHAMP Player Vs. Player Instruction Manual.

REFER TO DIAGRAM 1

#### Solution A: ADDITION OF 2 CAPACITORS

For PCB Part Numbers DE-0190-0, DE-0190-1 and DE-0190-2, perform the following modification on the device at location H8 (74LS04) on the top PCB.

- a) Carefully solder a 10 MicroFarad (10MFD), 16 volt tantalum/aluminum capacitor between Pin 3 and Pin 7 of the device (pin 7 is ground). Be careful to observe the polarity of the capacitor! the side marked PLUS (+) must be connected to Pin 3.
- b) Carefully solder a 10 MicroFarad (10MFD), 16 volt capacitor between Pin 11 and Pin 7 of the device. Be careful to observe the polarity of the capacitor! the end marked PLUS (+) must be connected to Pin 11.

DO NOT overheat the device.

DO NOT apply excess solder.

DO NOT allow solder bridging to adjacent pins on the device.

REFER TO DIAGRAM 2

#### Solution B: COIN DOOR HARNESS MODIFICATION

On the Coin Control Coin Door assembly the following needs to be done on the harness coming out of the coin mechanism. Instead of using Coin 1 socket you want to switch to Coin 2 socket by using either one of the following fixes.

- c) Using AWG # 18 (or larger) wire, run a ground wire from one of the joystick studs on the control panel to the ground stud on the power supply chassis (for Dynamo produced games, run this ground wire to the ground stud at the noise filter which is part of the back door interlock assemble). DATA EAST produced games may already have a ground wire connected to one of the joystick mounting studs. If so, this wire is probably bundled with the other signal wire, and must be clipped out.

REFER TO DIAGRAM 4

- 1) On the 6 Pin molex connector having male pins. Relocate the wire located in hole 2 to hole 5.
- 2) If you do not have a "Pin Pusher type tool" you may cut the black wire on the Female Pin Side of the molex connector, strip the ends of the wire and then tie them up to the wire located in hole 2 of the male pin side of the molex connector.

REFER TO DIAGRAM 3

#### Solution C: EPROM SPEED VERIFICATION

Examine the proms designated BS 16 through BS 24 on the PC Board. Refer to the attached chart and verify that the speed of the proms designated Bs 16 through BS 24 is 200, 250, or 300 nano-seconds. The manufacturers code will tell you the speed of the proms. 350 or 450 nano-second proms are slower, and may not work.

If you have 350 or 450 nano-second Eproms, call our toll free number to arrange replacement proms.

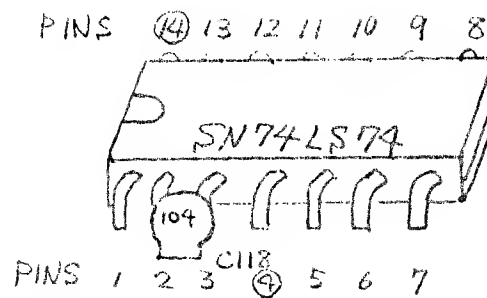
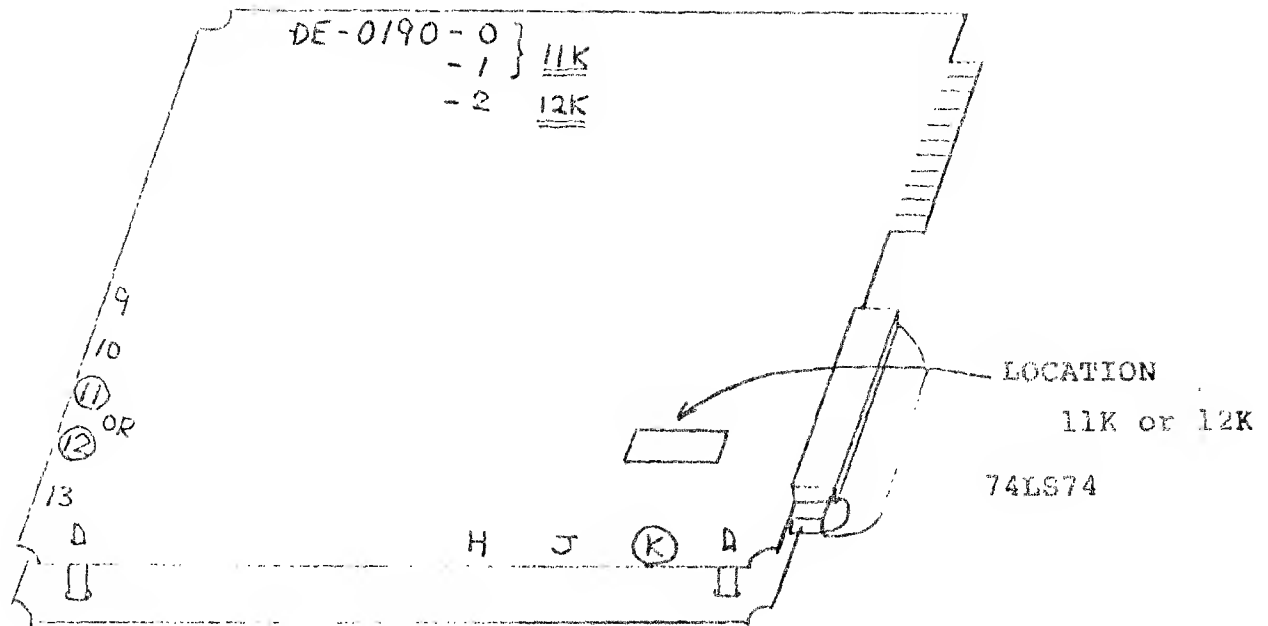
You will not be receiving a different program on these Eproms, but rather just faster Eproms. The need for these Eproms should only occur in a very few instances and you should not resort to this unless you have tried all of the above procedures in a step by step fashion.

#### Solution D: GROUNDING

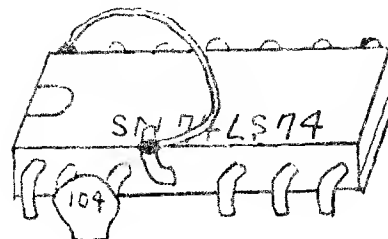
- a) Using SWG #18 wire (or larger) jumper from the left coin mechanism to the right coin mechanism and then to the coin door frame.
- b) Run a second ground wire from the coin door frame to the ground stud on the power supply chassis. Do not run this ground wire to the logic ground terminal on the power supply.

NOTE: For games having serial numbers higher than 261000 (produced by Dynamo) run the ground wire from the coin door frame to the ground stud at the noise filter which is part of the back door interlock assembly. You can locate the game serial number and manufacturer by looking at the labels on the back of the cabinet.

# DIAGRAM 1



BEFORE MODIFICATION



WHEN MODIFIED

DIAGRAM 2

PCB

DE-0190-0

-1

-2

LOCATION

8H

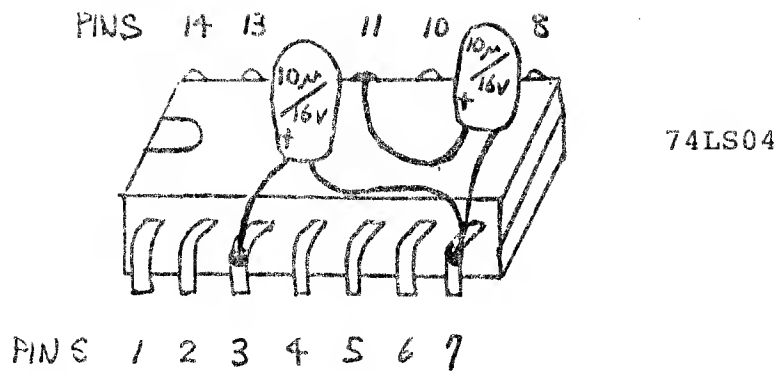
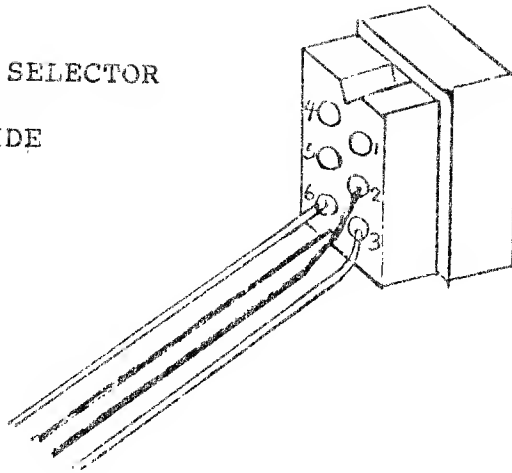


DIAGRAM 3

COIN SELECTOR  
SIDE



MAIN HARNESS  
SIDE

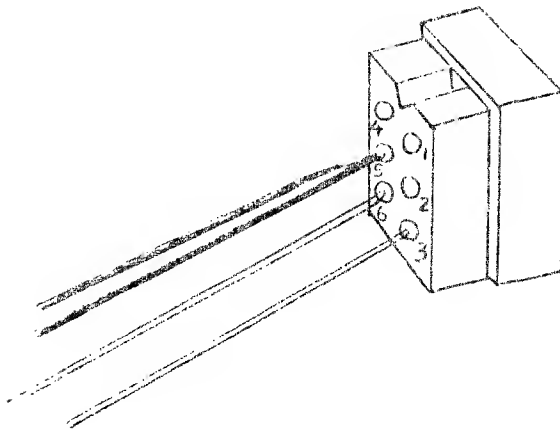
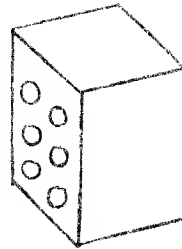
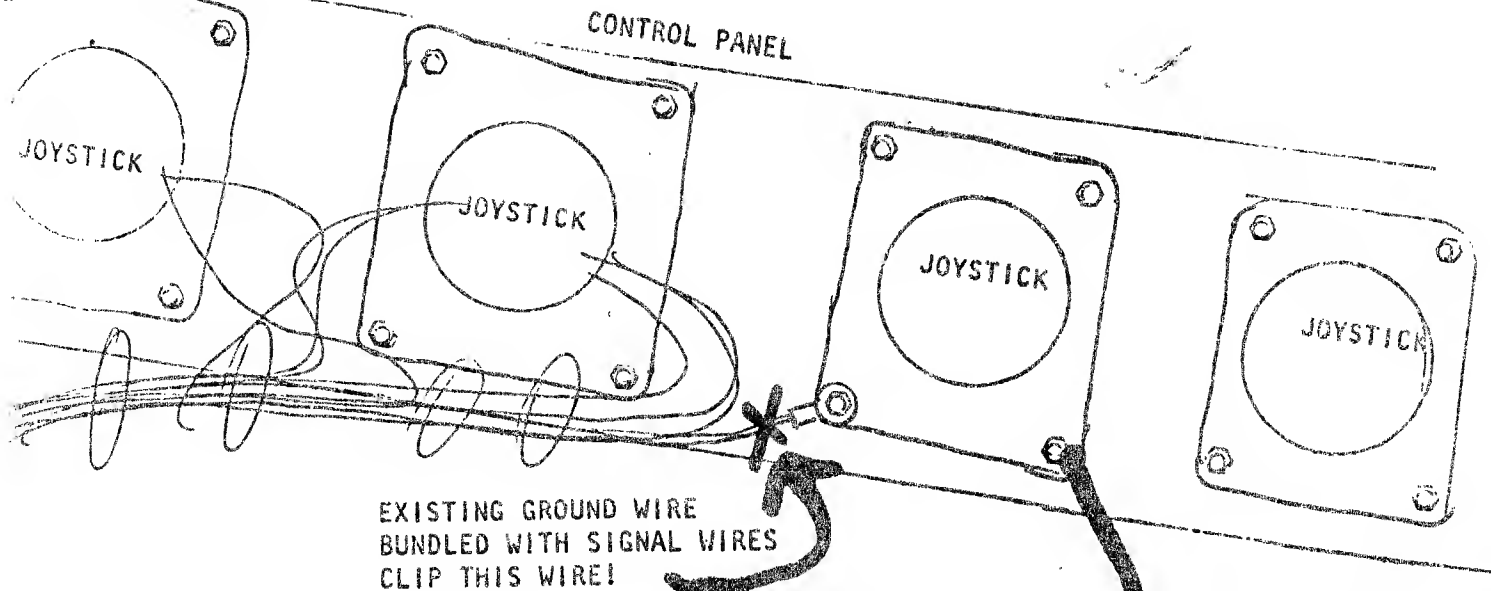


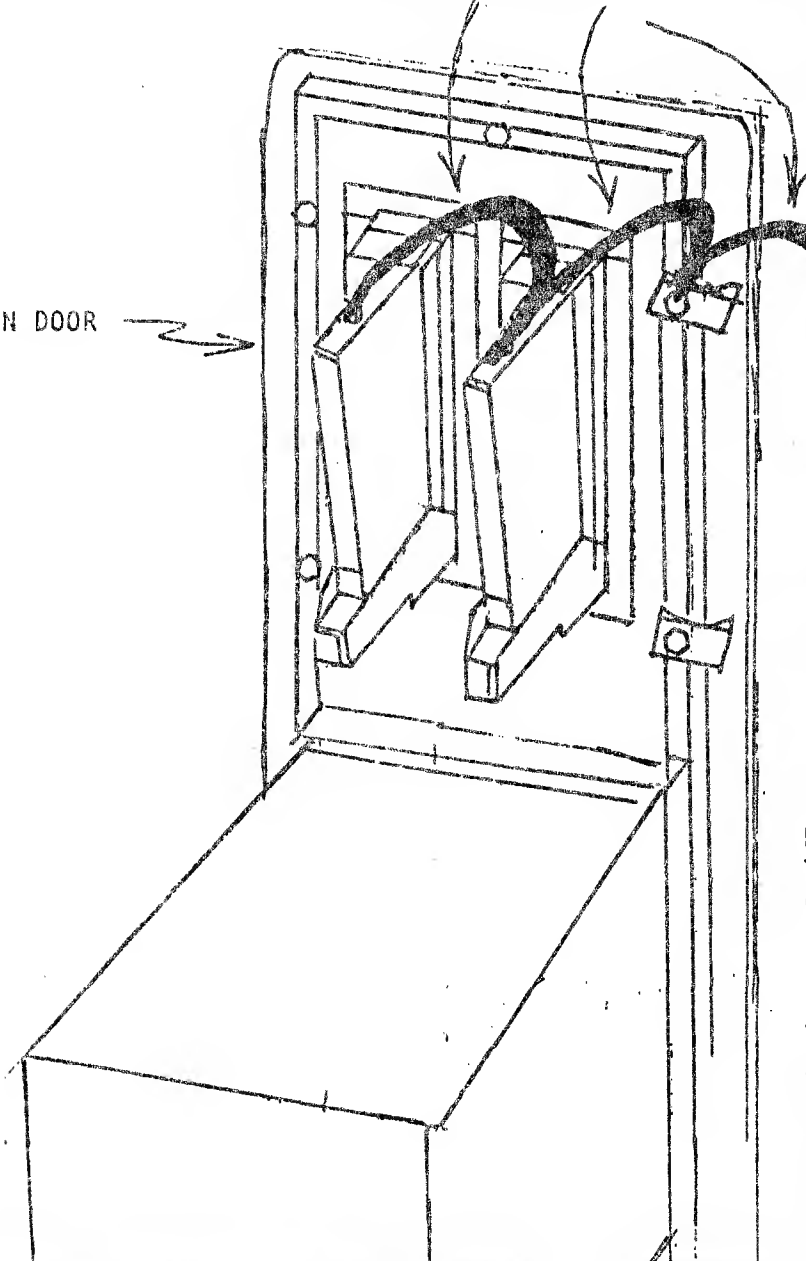
DIAGRAM 4  
GROUNDING



JUMPER LEFT COIN MECH.  
TO RIGHT COIN MECH.  
TO COIN DOOR FRAME MOUNTING BOLT

ADD THIS WIRE  
(use AWG #18  
or larger)

COIN DOOR



ROUTE THESE WIRES  
TO THE RIGHT OF THE  
COIN DOOR AND AWAY  
FROM SIGNAL WIRES

TERMINATE THESE WIRES  
AT THE GROUNDING STUD  
ON THE POWER SUPPLY  
CHASSIS FOR DATA EAST  
PRODUCED GAMES, OR  
AT THE NOISE FILTER  
GROUND STUD (DYNAMO GAMES)



# EPROM SPEED VERIFICATION CHART

<u>MANUFACTURE</u>	<u>CODE NUMBER</u>	<u>SPEED</u>	<u>MANUFACTURE</u>	<u>CODE NUMBER</u>	<u>SPEED</u>
TI	2764-45	450ns	HITACHI	HN4827128G	250n
	2764-35	350ns		-25	
HITACHI	HN482764	250ns		HN4827128G	300n
	HN482764G	250ns		-30	
	HN482764-3	300ns		HN4827128G	450n
	HN482764-4	450ns		-45	
	HN482764G-4	450ns	AMD	AM27128-1DC	150n
	HN482764G-2	200ns		-2DC	200n
FUJITSU	MBM2764-20	200ns		AM27128DC	250n
	MBM2764-25	250ns		AM27128-3DC	300n
	MBM2764-30	300ns		-4DC	450n
OKI	MSM2764AS	450ns		-15DC	150n
MITSUBISHI	MSL2764K	250ns		-20DC	200n
NEC	UPD2764D-Z	200ns		-25DC	250n
	UPD2764D	250ns		-30DC	300n
	UPD2764D-3	300ns		-45DC	450n
	UPD2764D-4	450ns	MITSUBISHI	MSL27128K	250n
AMD	AM2764-20DC	200ns		MSL27128K-2	200n
	AM2764-2DC			MSL27128K-3	300n
	AM2764-25DC	250ns	INTEL	D2764	250n
	AM2764DC			D27128-4	400n
	AM2764-30DC	300ns			
	AM2764-3DC				
	AM2764-45DC	450ns			
	AM2764-4DC				

# Karate Champ

( PC-8/82 )

○ WIRING HARNESS

CN3 CONNECTOR CR7E-44DA-3.96E

PART INST. SURFACE		SOLDERING SURFACE	
Pin No	Signal	Pin No	Signal
1	1P RIGHT - DOWN	A	2P RIGHT - DOWN
2	1P RIGHT - UP	B	2P RIGHT - UP
3	1P RIGHT - LEFT	C	2P RIGHT - LEFT
4	1P RIGHT - RIGHT	D	2P RIGHT - RIGHT
5	1P LEFT - DOWN	E	2P LEFT - DOWN
6	1P LEFT - UP	F	2P LEFT - UP
7	1P LEFT - LEFT	H	2P LEFT - LEFT
8	1P LEFT - RIGHT	J	2P LEFT - RIGHT
9	1P OPTION 1	K	2P OPTION 1
10	1P OPTION 2	L	2P OPTION 2
11	1P SELECT	M	2P SELECT
12	COIN 1	N	COIN 2
13	COIN COUNTER - 1	P	COIN COUNTER - 2
14	TV. BLUE	R	TV. GREEN
15	SYNC.	S	TV. RED
16		T	
17	SOUND (+)	U	SOUND (-)
18	+ 12 V	V	- 5 V
19	+ 5 V	W	+ 5 V
20	+ 5 V	X	+ 5 V
21	GND	Y	GND
22	GND	Z	GND

CONTROL  
WIRES  
#1  
BLUE  
VIOLET  
BROWN  
WHITE  
RED  
VIOLET  
GRAY  
BLUE

ORANGE

YELLOW

○ DIP SWITCH SETTINGS

DIP SWITCH					
NO.	SETTING				OPTION
1	O F F		O N		Type
	TABLE		UP-RIGHT		
2	O F F		O N		Music in Attractive Mode
	NO MUSIC		MUSIC		
3	O F F		O N		Free Game
	NORMAL		FREE GAME		
4	O F F		O N		Game Difficulty
	EASY		DIFFICULTY		
5	OFF	OFF	O N	O N	Game Charge  Up-right for Selector-Left
6	OFF	O N	OFF	O N	
	1 COIN	1	2	3	
	1 PLAY	2	1	1	
7	OFF	OFF	O N	O N	Game Charge  Table, Up-right for Selector-Right
8	OFF	O N	OFF	O N	
	1 COIN	1	2	3	
	1 PLAY	2	1	1	

ORANGE RED - GND.  
GREEN BLACK - 1 PLAY  
RED YELLOW 2 PLAY

GREEN RED L UP  
BLUE RED L DOWN  
RED L LEFT  
RED WHITE L RIGHT

BLUE YELLOW R UP  
YELLOW GREEN R DOWN  
ORANGE R LEFT  
BROWN R RIGHT